

12-31-86

Tri-Cities

P-1

What have we Learned
that is significant to the SI?

1. No wells in Section 27, 28, 33 or 34 TIN REG that could be considered upgradient (Per DCWR or USGS).
2. Reports with data from 1976

1981-82 and from 1983 all generally agree that the gradient and flow direction under the landfill is to the east, east-south-east, or southeast toward a pumping depression in the East Salt River Basin. A second pumping depression occurs to the northwest and accounts for the north-northwest gradient in the vicinity of IBW.

The divide between these two pumping depressions is generally west of the Tri-city Landfill, but its exact position is not ~~usually~~ well documented due to a lack of wells ~~to~~ immediately west of the site. In the three water table maps, the contours outlining the divide shifted (could be rationalized by different recharge and different pumping rates).

The USGS reports that in times of recharge from the river, a 40 to 50 foot ground water mound occurs under the

river. During these times the local gradient may be reversed under the landfill. (this is not documented, but it is a possibility that must be considered in any hydrologic analysis).

3. The Clean-Health Center Well in S. 29 T2N R5E -

This well probably is not upgradient from the Tri-City Landfill. It is usually shown in the edge of the Northwest trending flow to the pumping depressions in North Phoenix.

However - the water that it taps comes from the divide between the two pumping depressions.

For a preliminary study, we could assume the water quality in this well is similar to water quality in Sections (S) 28, 32 and 34 that is up gradient. This assumption could not be confirmed or destroyed without additional well data and that would probably require drilling some piezometric and monitoring wells.

4. Monitoring Wells East of and adjacent to the landfill.

These are probably the best existing wells to check on contamination. However, ~~they are~~ one has a

rather long screen interval so

that contaminated upper water

may be diluted. The other has
a shorter interval as is normal
in ~~such wells~~ detection wells.

5. Pros and Cons of drilling
more wells (west of the landfill).

Wells drilled just west of the
landfill would be "upgradient"
most of the time. During periods
when there was water in the
river and when ~~the~~ local
recharge produced a groundwater
mound, these western wells may
actually be "downgradient" (temporarily).

Thus, if upgradient wells were
to be drilled west of the land
fill, a series of wells at different
distances would be required.

~~wells~~ to assure that upgradient
conditions were found. The possibility
of temporary reversal (reverse flow)
would have to be addressed, and
the extent if any, of such reversal
be found.

A zone from $\frac{1}{4}$ to over $\frac{1}{2}$ mile
west of the landfill could be
contaminated by local gradient
reversal when there is recharge
from the river. ~~If wells we~~